

## **REMARKS/ARGUMENTS**

### **1. Objections to the Claims**

The Examiner has objected to Claims 1-8 based on various informalities. Applicant has amended the claims to place them in proper U.S. format, and to correct for multiple dependency problems. Therefore, Applicant submits that Claims 1-8 should now be in acceptable format.

### **2. Rejection Under 35 U.S.C. §102**

The Examiner has rejected Claims 1-2 under 35 U.S.C. §102(b), based on the contention that they are anticipated by U.S. Patent No. 5,863,192, issued to Motegi (Motegi). Applicant respectfully traverses the Examiner's contentions. To better clarify the invention, Applicant has amended the preambles to specify that the present invention is directed to a thermal post-combustion device having a burner, wherein, amongst other things, the post-combustion device is supplied with fuel gas axially at a particular pressure.

Motegi teaches burners having low nitrogen oxide generation. The burner in Motegi, however, is very different from the burner disclosed and claimed in the present invention. The present invention discloses and claims a device having main discharge openings arranged a particular radial distance from the axis of the base member, and which have a particular cross-section, such that with fuel gas at the particular supply pressure individual flames form at the main discharge openings.

On the other hand, Motegi discloses a burner in which the flames form distant from the discharge openings. (Motegi Col. 2, Line 62-Col. 3, Line 3; Col. 9, Lines 53-63).

Furthermore, the individual flames in the present device substantially do not overlap. Motegi actually teaches away from non-overlapping flames. Motegi discloses a "diffusion flame." Figs. 5

and 6 of the present invention, in combination with the distant ignition from the discharge openings clarify that the flames in Motegi will overlap at ignition.

From the above, Applicant submits that Claims 1-8 are not anticipated by Motegi. Furthermore, the present invention is not rendered obvious by Motegi either. The present invention is aimed at creating a complete combustion of pollutants entrained in exhaust air. To do so, low temperature flames are used to reduce NO<sub>x</sub> production. For each given pressure of the fuel gas, Claim 1 of the present invention provides instruction for (1) the radial distance of the main discharge openings from the axis of the base member, (2) their cross section, such that (3) the individual flames form at the main discharge openings, such that substantially do not overlap. (See, e.g., Page 2, Lines 11-28 of specification). Motegi provides absolutely no suggestion or teachings to solve the NO<sub>x</sub> problems in this manner.

### 3. Conclusion

Based on the above, Applicant submits that the present claims should now be in condition for allowance. Therefore, reconsideration and passage to allowance of Claims 1-8 is respectfully requested.

Should anything further be required, a telephone call to the undersigned at (312) 226-1818 is respectfully requested.

Respectfully submitted,

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One of Applicant's Attorneys

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Patent Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 1, 2005

Jacob D. Koering

Name of Applicant, assignee, applicant's attorney or Registered Representative



Signature